factors like filgrastim is a predictor of poor outcome after auto-HCT for AL. (Leung N et al. Blood 2005;106:3353-3357)
Methods: We performed a retrospective chart review to identify patients with excessive weight gain while undergoing filgrastim-induced PBSC mobilization. The primary endpoint was to determine the incidence of > 2% body weight gain during PBSC mobilization. Secondary endpoints were to identify the factors that predict abnormal weight gain and to evaluate its impact on NRM and OS after auto-HCT.
Results: We identified 95 patients with AL who underwent PBSC mobilization and collection followed by auto-HCT between 2002 and 2011. Thirty-nine (41%) patients had renal involvement, 12 patients had cardiac involvement (12.6%) and 5 (5.2%) patients had liver involvement. Seven patients required hospitalization during PBSC mobilization due to fluid overload. Six patients died within a year of auto-HCT non-relapse causes with 1-year NRM of 6.3%. Median follow up after auto-HCT in surviving patients was 13 months. Kaplan-Meier estimates of median OS was 73 months. Forty-nine (51.5%) patients had >2% weight gain due to fluid overload during PBSC mobilization, while 46 patients (48.5%) had ≤2 % weight gain. More patients with >2% weight gain required diuretics (34 vs. 10: $P < .0001$) and had lower median serum albumin (2.8 vs. 3.75 g/dl, $P < 0.0001$). There were no significant differences in baseline serum creatinine, GFR, alkaline phosphatase, filgrastim dose, urine total protein, BNP, ejection fraction, cardiac septal thickness, number of organs involved, or cardiac or renal involvement between the two groups. 1-year NRM was 6.1 vs. 8.6 % in patients with >2% or ≤2% weight gain (p=0.70). There was no significant difference in median OS survival between patients with > or ≤2% weight gain (p=0.54: Figure 1).
Conclusion: Patients with AL and low baseline serum albumin are at higher risk of fluid retention and excessive weight gain that may require hospitalization. However, in our study, this weight gain did not have an adverse impact on NRM or OS.

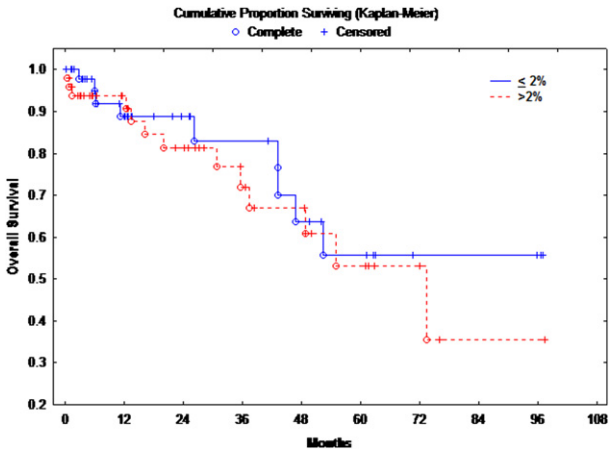

Figure 1.

139

Successful Stem Cell Mobilisation with Plerixafor in a Patient with Multiple Myeloma and Dialysis-Dependant Renal Failure

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The aim of this case report is to describe the use of plerixafor in a patient with multiple myeloma and dialysis-dependant renal failure. A 43-year-old man with multiple myeloma and dialysis-dependent renal failure was evaluated for an autologous stem cell transplant (ASCT). Following Stem cell mobilisation with cyclophosphamide 1.5g/m2 and 9 doses of granulocyte colony-stimulating factor (G-CSF) 10mcg/kg/day the patient's pre apheresis CD34+ count was inadequate at 2.18 cells/μL. Perixafor was prescribed to achieve stem cell mobilisation. There is no dose recommendation for plerixafor in patients with CrCl< 20mL/min or those on dialysis. In this patient we used 0.16mg/kg/day dose, which is the dose recommended for patients with CrCl 20-50mL/min. The first plerixafor dose was given subcutaneously post-dialysis 8 hours before apheresis and the second dose was given the next day 9 hours prior to second apheresis session. The pre-apheresis CD34+ count was 11.99 and 8.82 cells/μL with a total White cell count of 22.2 and 17.3 x 10^9/L after the first and second doses respectively. The patient underwent stem cell collection via the Spectra Optia cell separator with a total yield of 2.4 x 106 cells/kg. There were no observed toxicities with plerixafor. In May 2012, 6 weeks after stem cell collection, the patient underwent ASCT with reduced dose of Melphalan 140mg/m2. Neutrophil engraftment occurred at day +11, the patient was discharged at day +16. To date the patient remains well and in remission. This case report illustrates that plerixafor can safely and effectively be used to mobilise adequate stem cells in multiple myeloma patients with end stage renal failure. Information regarding dosing and safety of plerixafor in dialysis patients remains limited, we hope that information provided by this report would be useful for other clinicians who are considering the use of plerixafor in this setting.

141

Brisk Elevation of Serum Lactate Dehydrogenase During G-CSF Priming is a Significant Predictor for the Ensuing Successful Autologous Peripheral Blood Stem Cell Collection

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Autologous stem cell transplantation plays a critical role in the management of patients with hematologic malignancies such as multiple myeloma and malignant lymphoma. The minimum number of CD34 positive cells required for transplantation is believed to be 2.0×10^6 cells/kg. Up to 20% of the patients, however, fail to reach the number after a single collection attempt and require multiple aphereses to obtain a sufficient number of stem cells. To predict the outcome of mobilization, several pre-mobilization factors have been investigated, including peripheral blood CD34+ cell count at the time of harvest, but little is as yet known about the significance of serum lactate dehydrogenase (LDH). We, therefore, sought to evaluate the predictive potential of serum LDH for the autologous stem cell yield. Peripheral blood stem cell mobilization attempts were made from April 2002 to March 2012 for 55 consecutive patients of hematologic disorders. Primary diagnosis of our patients and their mobilization chemotherapy regimens are shown in Table 1. All patient received G-CSF (filgrastim 400μg/sq/day or lenograstim 10μg/kg/day subcutaneously). None was mobilized with G-CSF alone. Aphereses were repeated until the total stem cell yield exceeded 2×10^6cells/kg, for maximum 3 consecutive days. Forty-four patients successfully produced the sufficient number of stem cells, while 11 patients failed (poor mobilizer).